

REMARKS

Summary of the Office Action

In the Non-Final Office Action, Applicant's election with traverse of Species I is acknowledged, claims 1 and 2 have been indicated to be generic, and claims 1-3 have been considered. Although the Office Action indicates that claim 2 is also readable to species I, Applicants believe that the Examiner intended to recite at this portion of the Office Action that claim 2 is also readable to species II since the previous Office Action had already stated that claim 2 was readable on species I. The drawings stand objected to because of a minor informality. Claims 2-3 stand rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claim 1 stands rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 5,461,237 to Wakamoto et al. (hereinafter Wakamoto). Claims 2-3 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Wakamoto in view of U.S. Patent No. 5,621,527 to Kaneda et al. (hereinafter Kaneda).

Summary of the Response to the Office Action

Applicants have amended the drawings to correct the minor informality indicated by the Examiner. Claim 1 has been amended, and claims 2 and 3 have been canceled without prejudice or disclaimer. The Office Action states that claims 1-3 are presently pending in this application. However, Applicant respectfully submits that while claims 4 and 5 are not currently under consideration, they still remain pending. Accordingly, claims 1 and 4-5 are presently pending in this application, and claim 1 is currently under consideration.

The Objection to the Drawings

The drawings stand objected to because of a minor informality, in particular FIG. 9. should allegedly be designated by a legend such as “Prior Art.” Applicant has amended FIG. 9 to label it as “Prior Art.” Applicant therefore respectfully requests that the objection to the drawings be withdrawn.

The Rejection under 35 U.S.C. §112

Claims 2-3 stand rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant has canceled claims 2 and 3 without prejudice or disclaimer. Accordingly, the rejection of claims 2 and 3 is now moot.

The Rejections under 35 U.S.C. §103(a)

Claim 1 stands rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Wakamoto. To the extent that the Examiner may consider this rejection to apply to the newly amended claim, the rejection is traversed as being based upon a reference that neither teaches nor suggests the novel features now recited in amended claim 1.

Wakamoto discloses in FIG. 11A an oblique projection type auto-leveling (AL) system wherein a detection light L2 from a light source 10 is collimated by a projection objective lens 11, and the collimated light beam is obliquely directed to a wafer 4 with respect to the optical axis AX of the projection optical system 3 (column 2, lines 45-49). Wakamoto further teaches

that a light reflected by the wafer 4 (collimated light beam) is focused by a focusing objective lens 12 onto a photo-sensing plane of a photo-sensor 13 (column 2, lines 50-53).

Claim 1, as amended, recites a tilt detector comprising, amongst other elements, a collimating lens and condensing lens constituting a single transmitting and receiving lens.

Wakamoto fails to teach or suggest this novel feature recited in newly amended claim 1.

Wakamoto discloses two separate lenses, a projection objective lens 11, and a focusing objective lens 12. Therefore, Applicant respectfully asserts that the rejection of claim 1 under 35 U.S.C. §103(a) should be withdrawn because Wakamoto does not teach or suggest each feature of independent claim 1, as amended. MPEP §2143.03 instructs that “[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 409 F.2d 981, 180 USPQ 580 (CCPA 1974).” Accordingly, Applicants respectfully assert that claim 1 is now in condition for allowance.

Claims 2-3 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Wakamoto in view of Kaneda.

Claim 2 was previously dependent upon claim 1 and claim 3 was previously dependent upon claim 2. Claims 2 and 3 have now been canceled without prejudice or disclaimer and substantially incorporated into claim 1 as newly amended. Therefore, to the extent the Examiner may consider this rejection to apply to the newly amended claim, the rejection is traversed as being based upon a combination of references that neither teach nor suggest the novel features recited in newly amended claim 1.

Claim 1, as amended, recites a tilt detector combination comprising, amongst other elements, light emitting means and light receiving means arranged symmetrically on the basis of an optical axis of the transmitting and receiving lens.

Wakamoto has been discussed above and fails to teach or suggest a single transmitting and receiving lens. Kaneda on the other hand discloses an optical type displacement sensor comprising a collimator lens 4a and a cylindrical lens 4b (column 9, lines 26-32, FIG. 20B). However, in the optical displacement sensor taught by Kaneda, the light emitting or transmitting element 1, and the light receiving element 3, are not arranged symmetrically to an optical axis of said transmitting and receiving lens, since the light emitting element 1 and the light receiving element 3 are formed in a single element as illustrated in FIG. 20B. The Office Action concedes, at page 3 that Wakamoto in view of Kaneda, do not disclose the emitting means and light receiving means arranged symmetrically. However, the Office Action alleges that such an arrangement “would have been know” and that “[i]t would have been obvious to modify Wakamoto in view of Kaneda with a known arrangement to make the system more accurate.” Applicant respectfully submits that there is no motivation taught or suggested by the cited references to modify the teaching of Wakamoto with the teachings of Kaneda to obtain the claimed device. Applicants submit that only through hindsight would one be motivated to modify Wakamoto and Kaneda to meet the limitations of the newly amended claim. MPEP §2141, under the heading “Basic Considerations Which Apply to Obviousness Rejections,” points out that “the references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention.” Absent any teaching or suggestion in the prior art to

adapt the teachings of Wakamoto with Kaneda to meet the claimed limitation, the rejection under 35 U.S.C. §103(a) is improper.

Claims 2 and 3 have been cancelled without prejudice or disclaimer, therefore, the rejection of claims 2 and 3 under 35 U.S.C. §103(a) is now moot.

CONCLUSION

In view of the foregoing remarks, Applicant respectfully requests reconsideration of this application, withdrawal of all rejections, and the timely allowance of claim 1, which is currently under consideration.

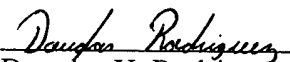
Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative to expedite the prosecution.

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 2 and 3 have been canceled without prejudice or disclaimer.

Claim 1 has been amended as follows:

1. (Amended) A tilt detector for detecting a tilt of a recording surface of an optical disc, comprising:

light emitting means for emitting a divergent beam of light to be incident on said recording surface of said optical disc;

a collimating lens for collimating the divergent beam of light emitted from said light emitting means and directing the collimated beam of light onto said recording surface of said optical disc;

a condensing lens for condensing the collimated beam of light from said collimating lens, directed onto said recording surface of said optical disc and then reflected from said recording surface; ~~and~~

light receiving means for receiving said collimated beam of light condensed by said condensing lens and detecting the centroid of the intensity of the received beam of light, said light receiving means including a receiving surface partitioned into a plurality of areas for receiving said collimated beam of light condensed by said condensing lens,

wherein said collimating lens and condensing lens constitute a single transmitting and receiving lens, and

wherein said light emitting means and light receiving means are arranged symmetrically on the basis of an optical axis of said transmitting and receiving lens.